Biscayne Bay
Minimum Flows and Levels (MFLs)

February 5, 2004

Water Supply and Resource Protection Tools in Chapter 373 F.S.

- Consumptive use permitting-harm: 1-2 years to recover
- Minimum flows and levels
  - Significant harm: several years to recover
- Water shortage: serious harm-long term harm
- Water reservations: protection of fish, wildlife, public health and safety

Minimum Flows and Level Overview

- Point at which further withdrawals cause “significant harm” to water resources of the area
- Water resources include fish and wildlife, water quality and quantity, recreation and navigation

MFL Establishment "Considerations"

- Consider changes and structural alterations to hydrology
- For example, dredging of Government Cut, flood control and drainage canals and structures

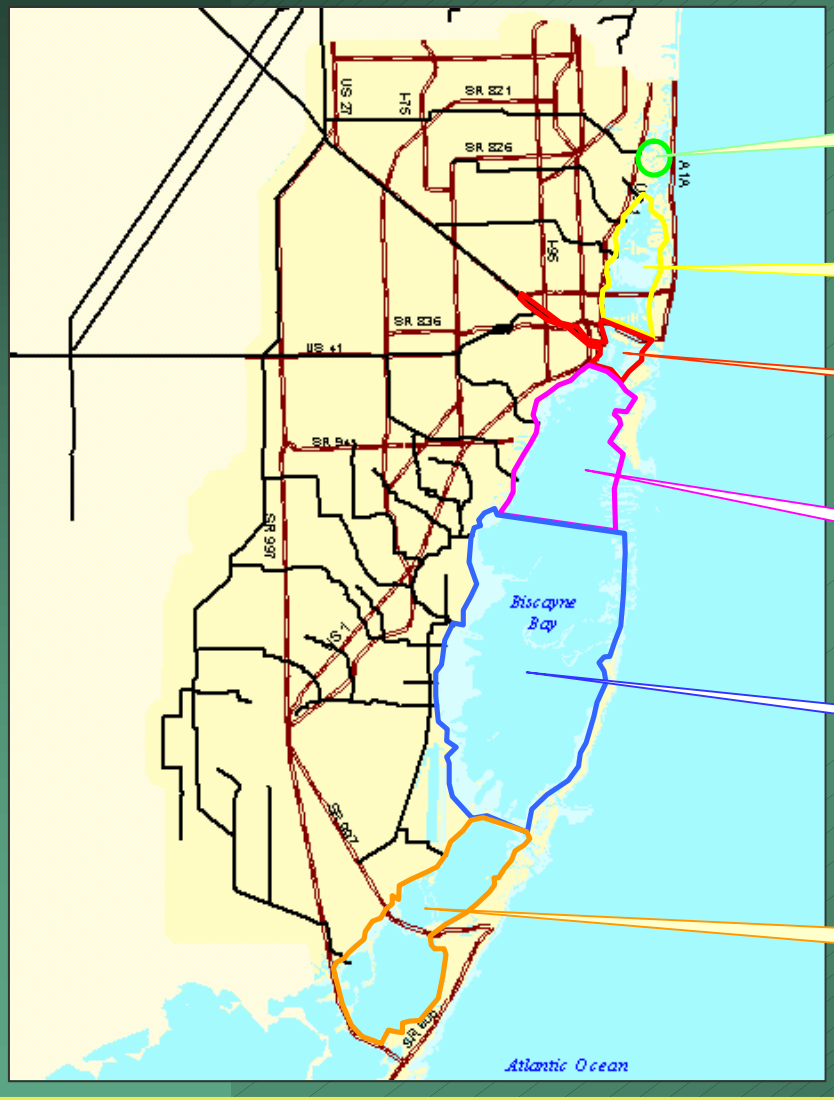
Minimum Flows and Levels Recovery or Prevention Strategy

- Achieve recovery of MFL “as soon as practicable”
- Recovery Plan will define the methods and timeframe for recovery

Priority Water Body List

- Annual process for selecting/revising priority water bodies
- Biscayne Bay currently listed for 2004
- Northern Biscayne Aquifer MFL adopted in 2001

Regions of Biscayne Bay



Snake Creek/Oleta River

North

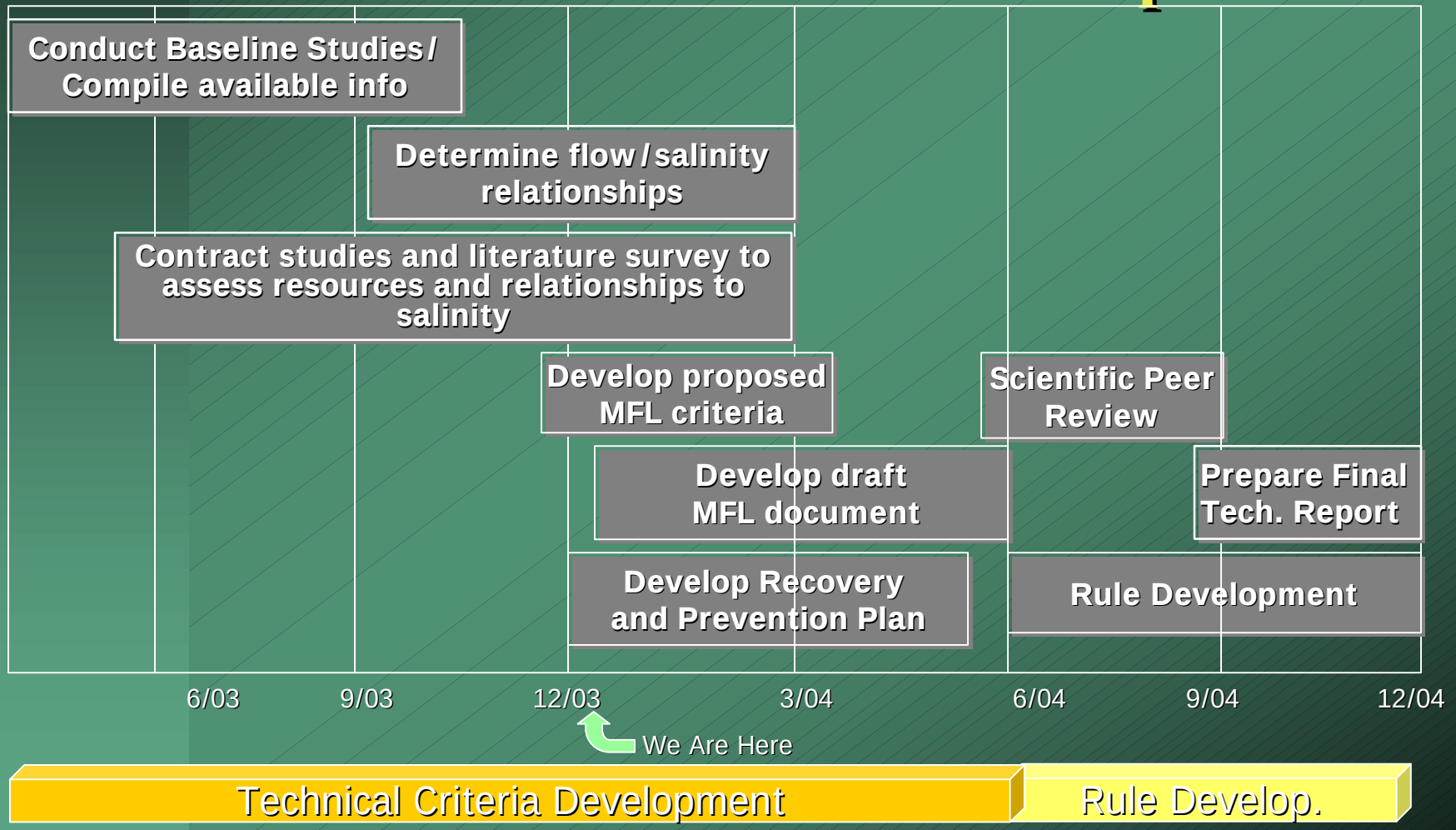
Miami River

North Central

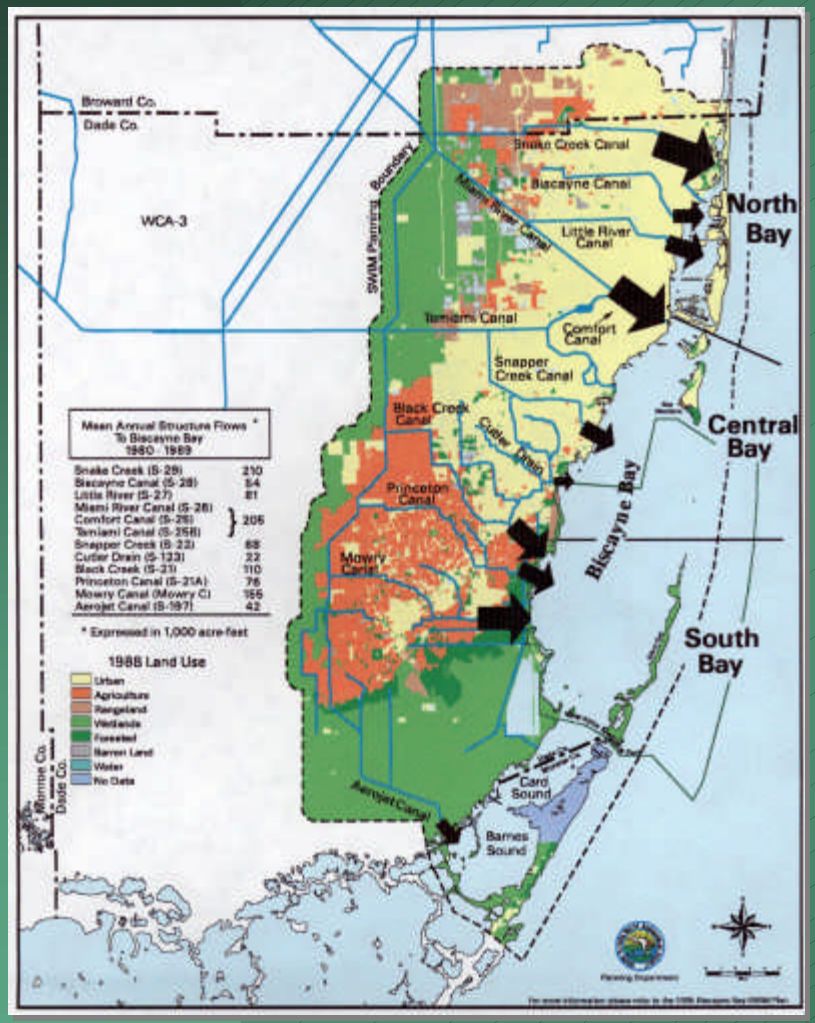
South Central

South

Schedules for South Central Biscayne Bay Technical Criteria and Rule Development



Background on Biscayne Bay

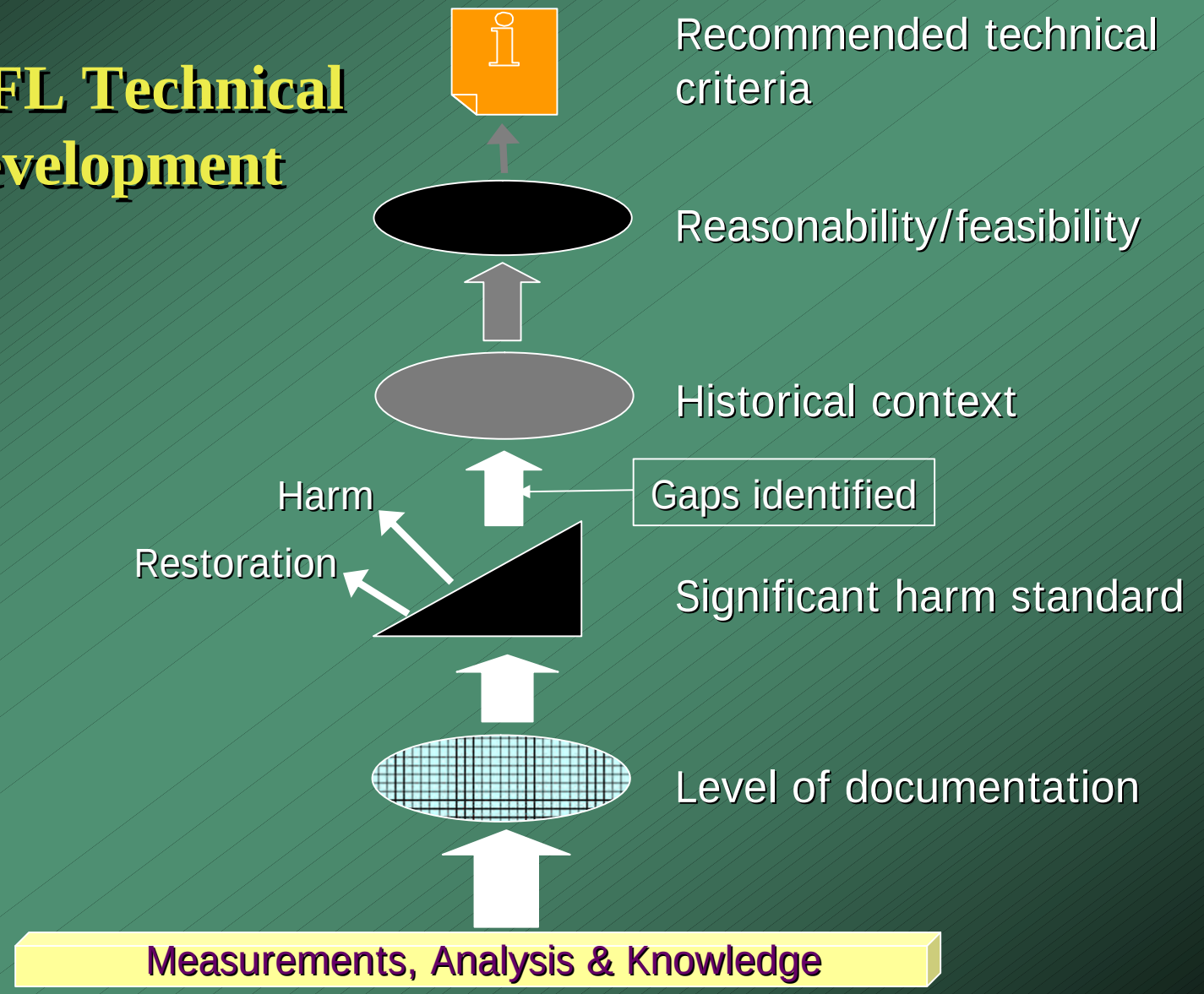


Character varies geographically by water quality, sediments, depths, uses, land use, water flows, circulation, jurisdiction, etc.

Background on Biscayne Bay

- A Lagoonal estuary
- Very DIFFERENT than riverine estuaries like St. Lucie or Caloosahatchee

Estuary MFL Technical Criteria Development Process



South Central Biscayne Bay MFL Information

- Science Literature
- Experts and Stakeholders- Technical Discussion Group
- Empirical Data (e.g. salinity, rainfall)
- Model Simulations (e.g. SFWMM,TABS-MDS)

Completed

- S. Miami-Dade rainfall analysis
- S. Miami-Dade water budget analysis
- Literature review
- Experts and stakeholders surveyed
- Bay segmented
- Approaches evaluated
- Base year run TABS-MDS

Contacts

- Joel VanArman- MFL Supervisor, 561-682-6715
  - Murray Miller- Project Manager, 561-682-6789
- Susan Ray- Research Supervisor, 561-682-6723
  - Rick Alleman- Research Coordinator, 561-682-6716

Soon to come: Biscayne Bay MFL web site at:

sfwmd.gov=>Major Projects=>Minimum Flow and Levels=>Biscayne Bay